

TIGER COMBAT HELICOPTER

Military airworthiness approach
compared to civil



TIGER – Military Airworthiness environment

AGENDA

1. OCCAR-EA
2. International airworthiness framework
3. Airworthiness initiative for military aircrafts
4. TIGER airworthiness management
5. TIGER airworthiness controlled environment
6. Conclusions

1. OCCAR-EA

Scope of activities
Organisation

1. Scope of activities

OCCAR is an international organisation for the management of cooperative defence equipment programmes.

OCCAR was created through the convention, equivalent to international treaty.

Current Member States:



BE



FR



DE



IT



ES



UK

Current (non-Member) Programme Participating States:



FI



LT



LU



NL



PL

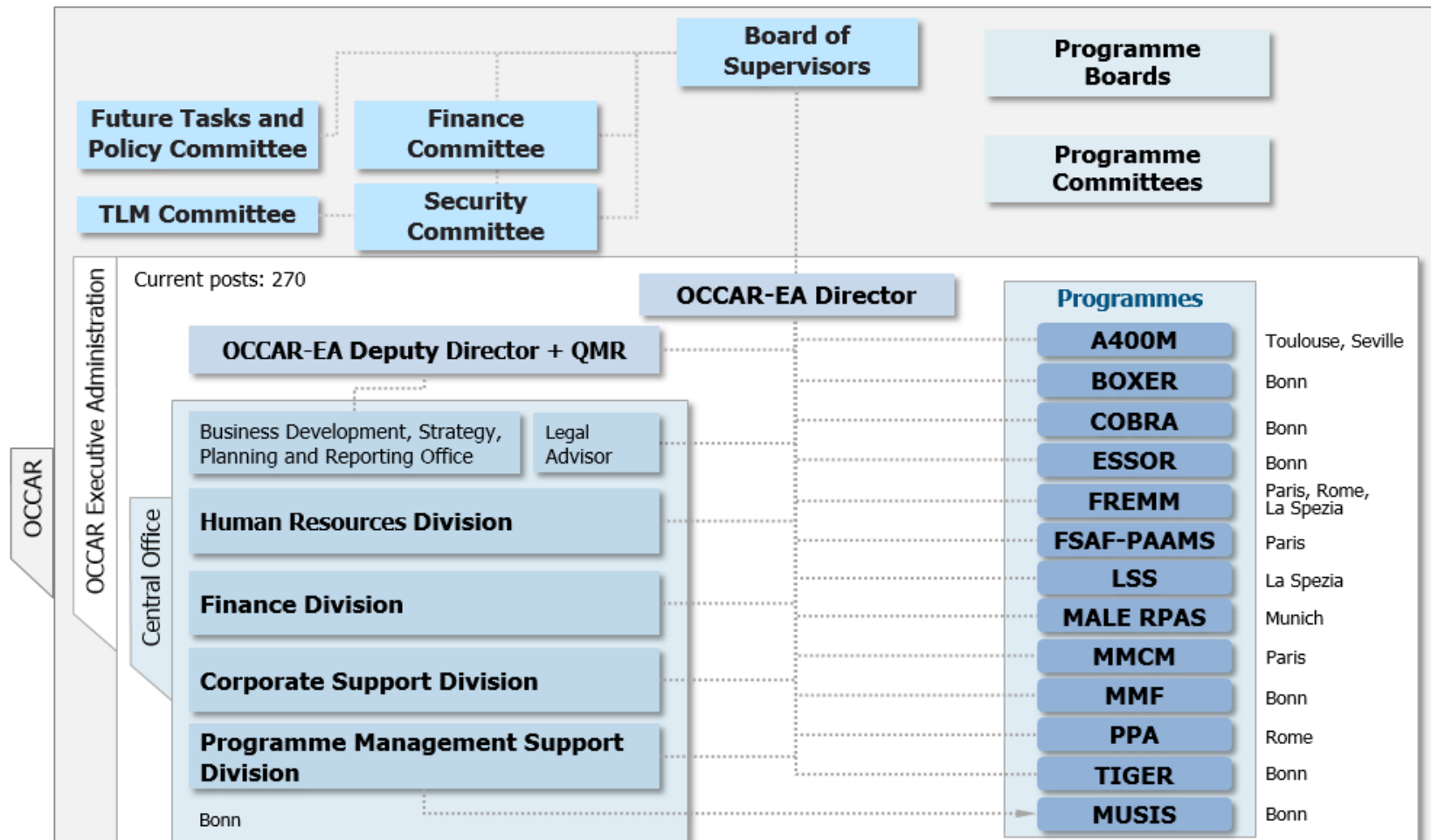


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TR

1. Organisation

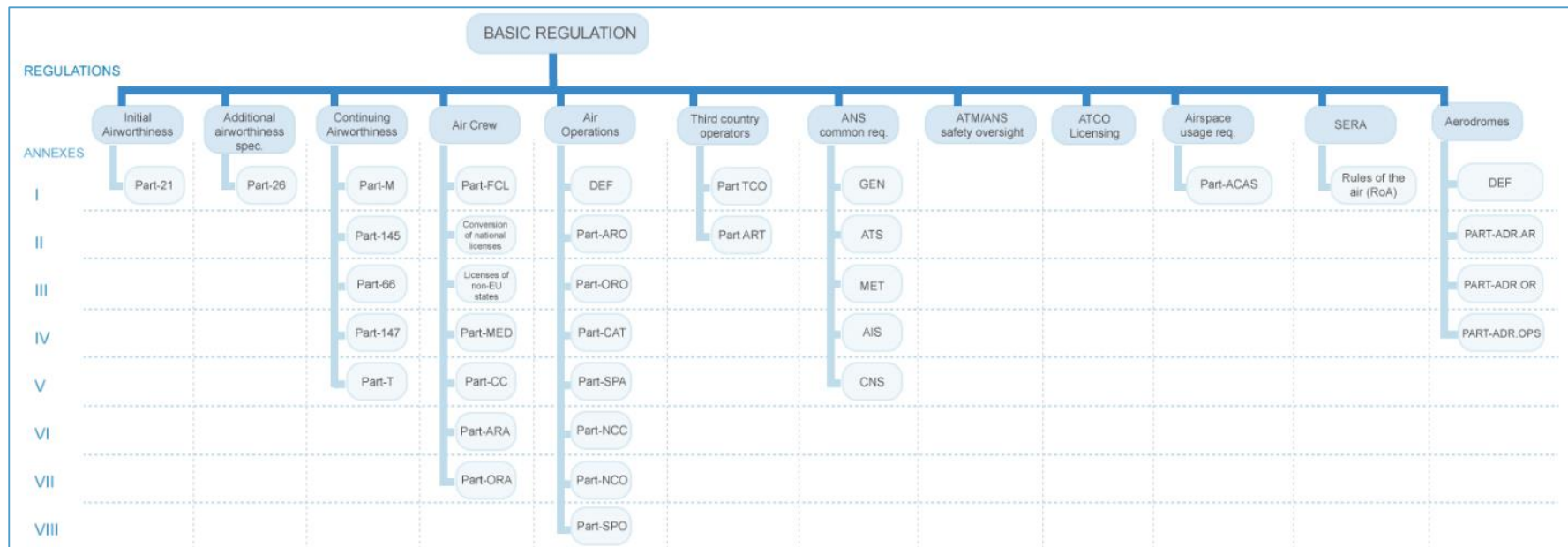


2. International airworthiness framework

EASA regulatory structure
Regulatory context for military aircraft

2. EASA regulatory structure

The basic regulation establish common rules in the field of civil aviation and establishing the European Aviation Safety Agency.



2. Regulatory context for military aircrafts

The basic regulation excludes from its scope the military, customs, police aircrafts. Member states are responsible.

In CHAPTER I – PRINCIPLES / Article 1 – Scope

[...]

*2. This Regulation shall not apply when products, parts, appliances, personnel and organisations referred to in paragraph 1 are engaged in **military**, customs, police, or similar services. The **Member States shall undertake** to ensure that such services have due regard as far as practicable to the objectives of this Regulation.*



The implementation of the military airworthiness management has to be done via a specific set of national laws. Each Nation is sovereign to enforce the military airworthiness.

3. Airworthiness initiative for military aircraft

EDA initiative

MAWA task forces

EMAR structure

Comparison EMAR / EASA structure

3. EDA initiative

European countries currently operate military aviation safety systems independently from each other

Each state being individually responsible for the regulation of its own military and state aircraft.

It has been recognised, therefore, that there exists a unique opportunity to agree on an EU-wide harmonisation and unification strategy for military airworthiness.

This strategy will also be of considerable benefit to defence European industry.

3. EDA initiative

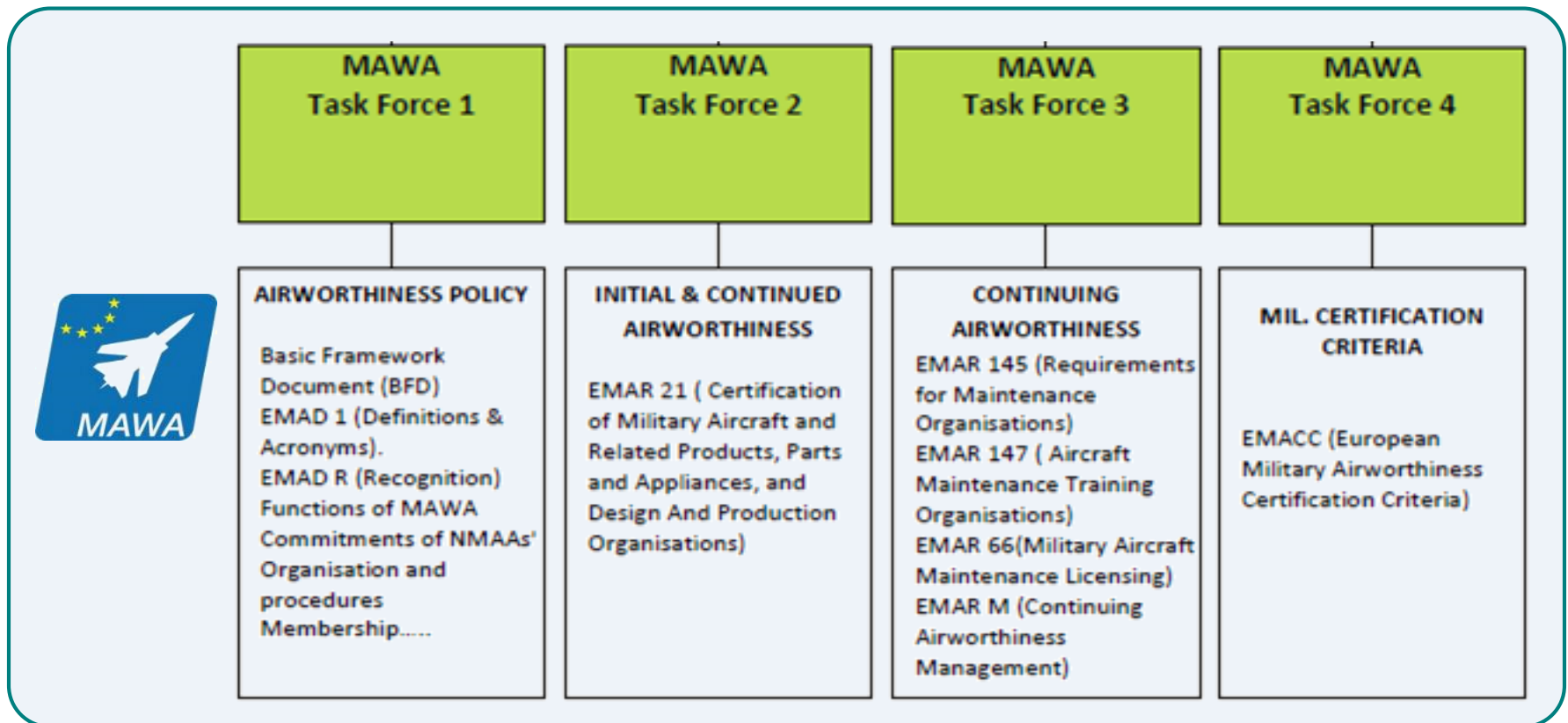
The European Defence Agency created the Military Airworthiness Forum.

In 2008 by Defence Ministers to harmonise European military airworthiness requirements. Military Airworthiness Authorities (MAWA) of the 27 EDA participating Member States.

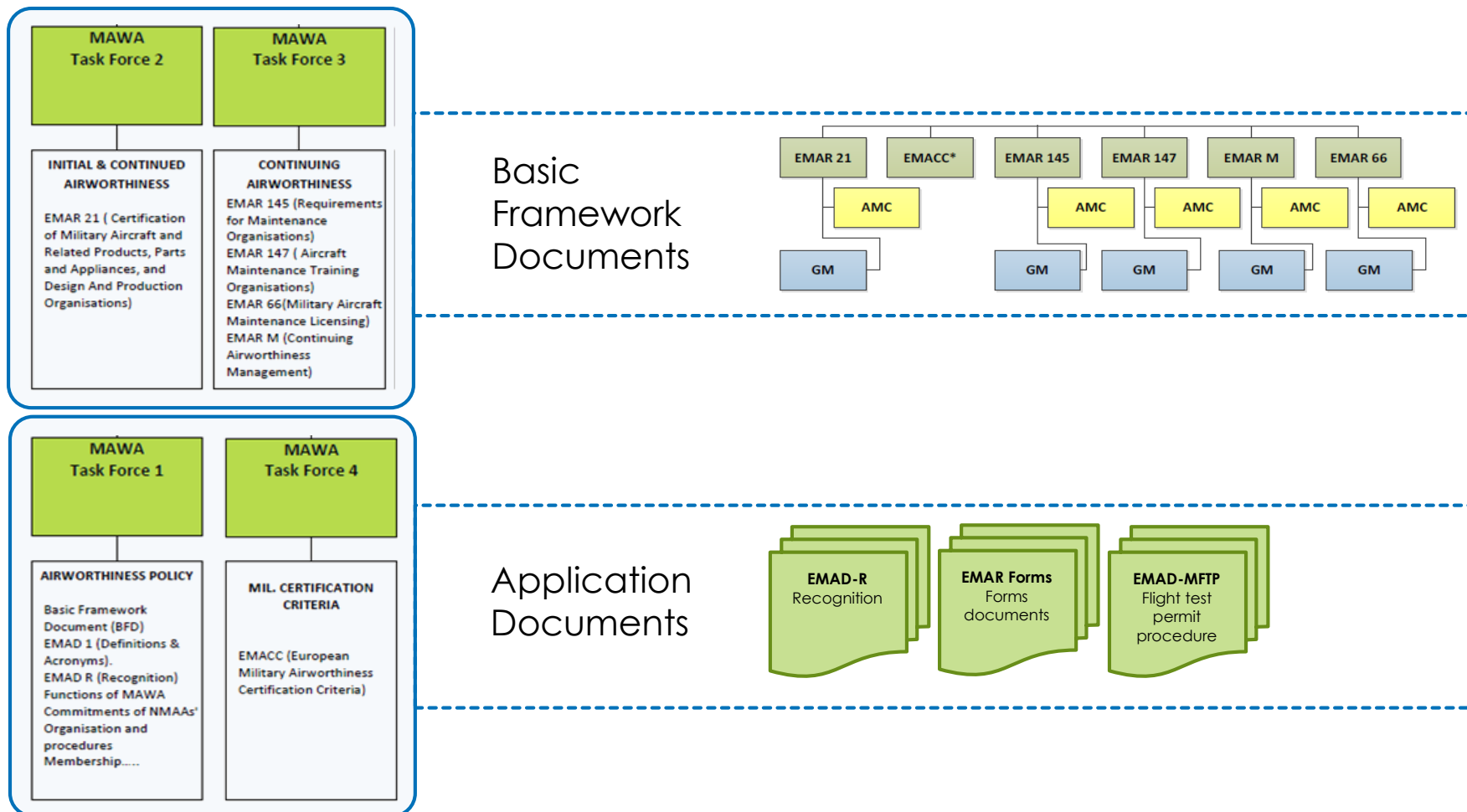
Creation of a set of “regulations” with the airworthiness as per civil framework organization.

3. MAWA task forces

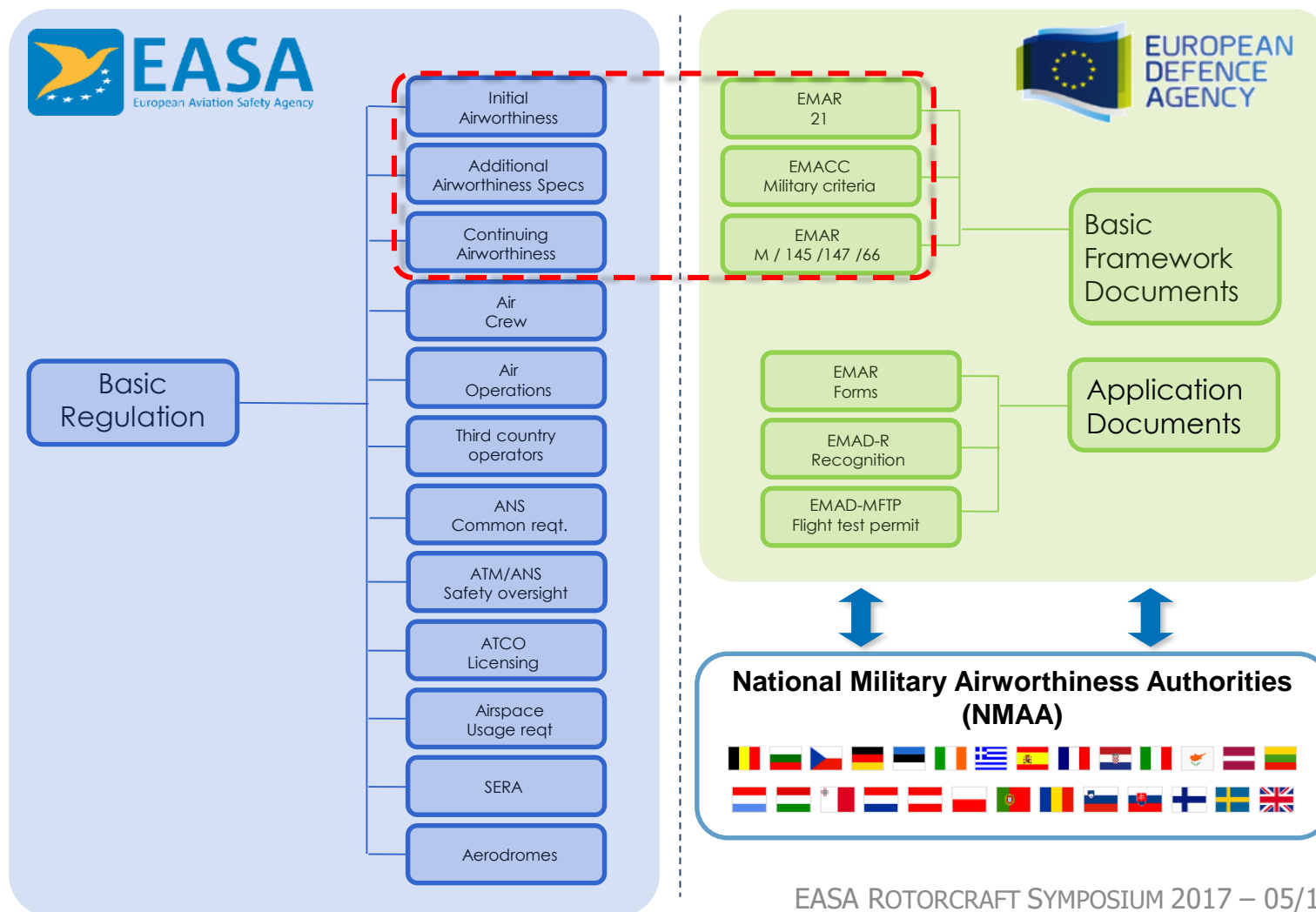
MAWA took the responsibilities to harmonize a framework for military aircrafts



3. EMARs structure



3. Comparison EASA / EMAR structures



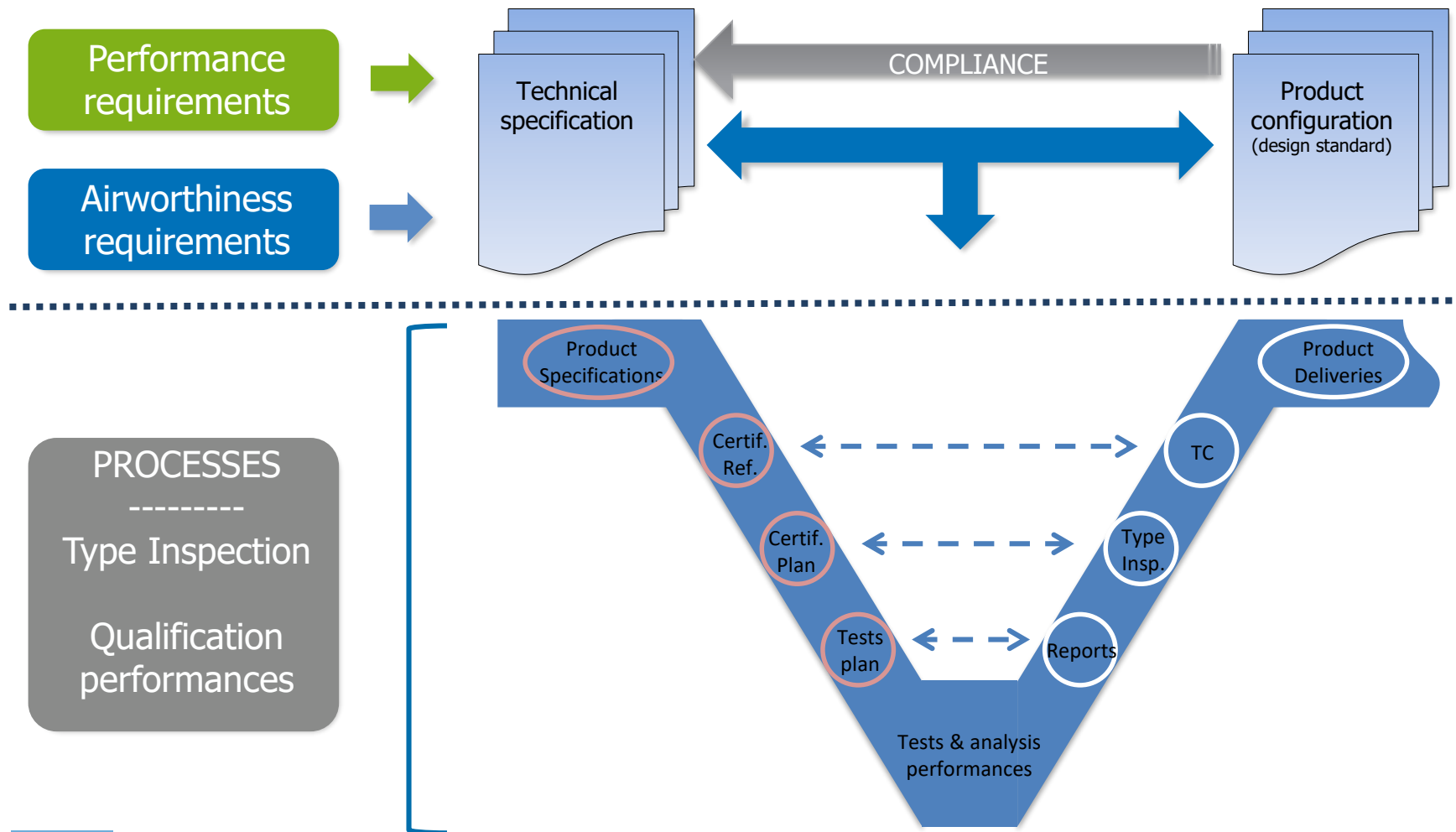
4. TIGER airworthiness management

Military product definition

Initial certification

Continuing airworthiness to the TC

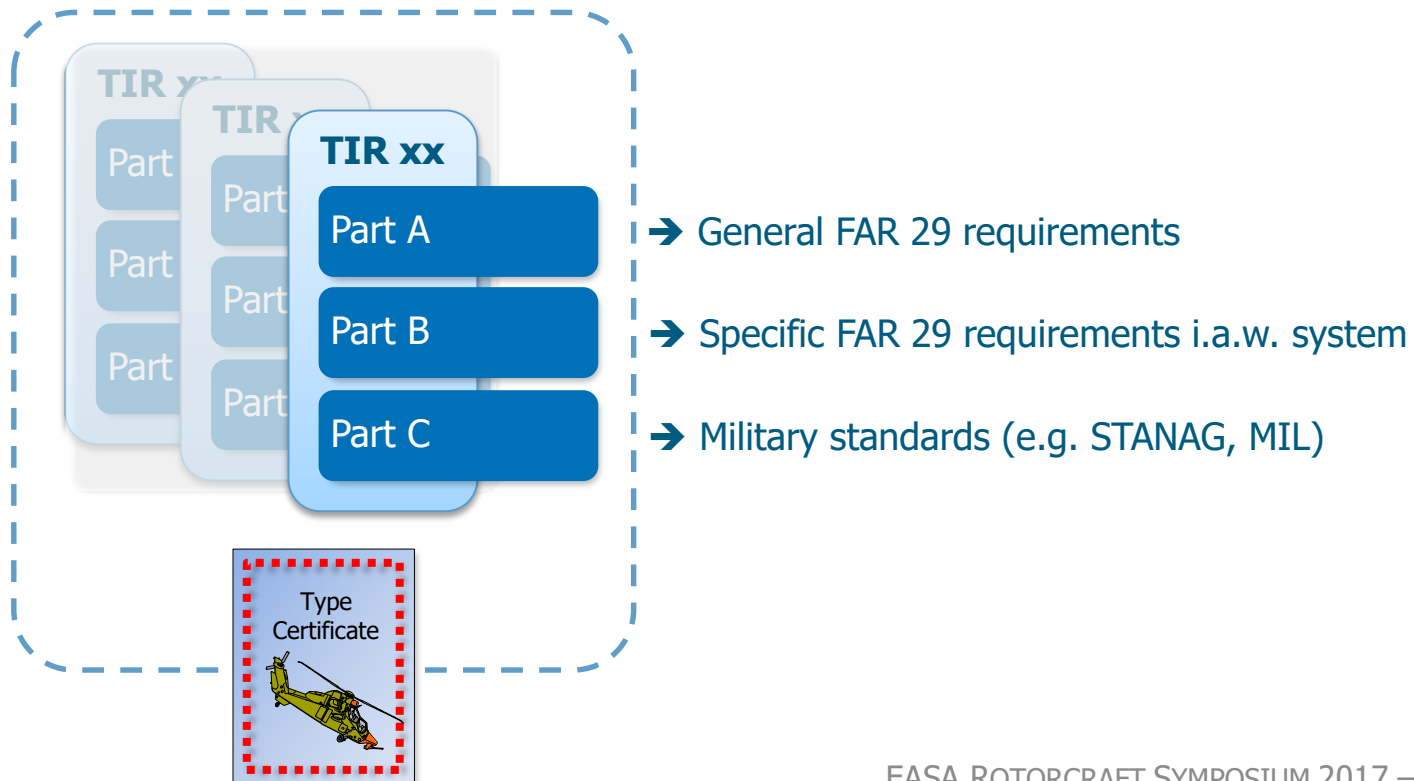
4. Military product definition



4. Initial certification

The TIGER followed a product certification concept in accordance with certification specification standards.

Initial airworthiness: under the management of the type inspection process.



4. Continuing airworthiness to the TC

After being granted with a Type Certificate, the continuing airworthiness to the TC shall be granted.

Continuing airworthiness to the TC is placed via contractual enforcement to the contractor:

- ☐ Modification / configuration management
- ☐ Repairs Management
- ☐ Technical event management

The contractor tailored its business model to the requirements requested / financed by the customer.

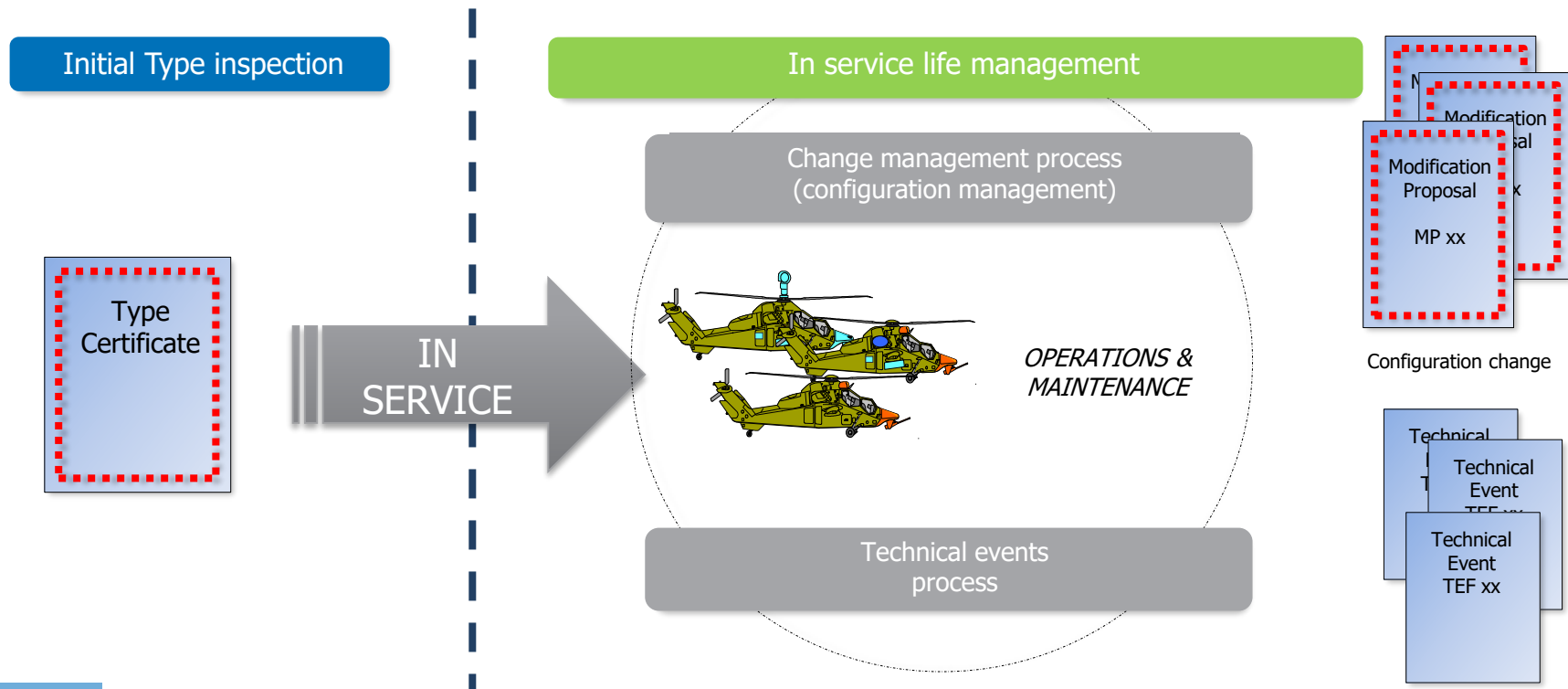


As each Nation is sovereign over the military airworthiness, the controlled environment is handle differently and generates an extensive workload.

4. Continuing airworthiness to the TC

For the in service life of the TIGER, activities are distributed between government and industries.

CAMO = government / Maintenance & training organization = industries

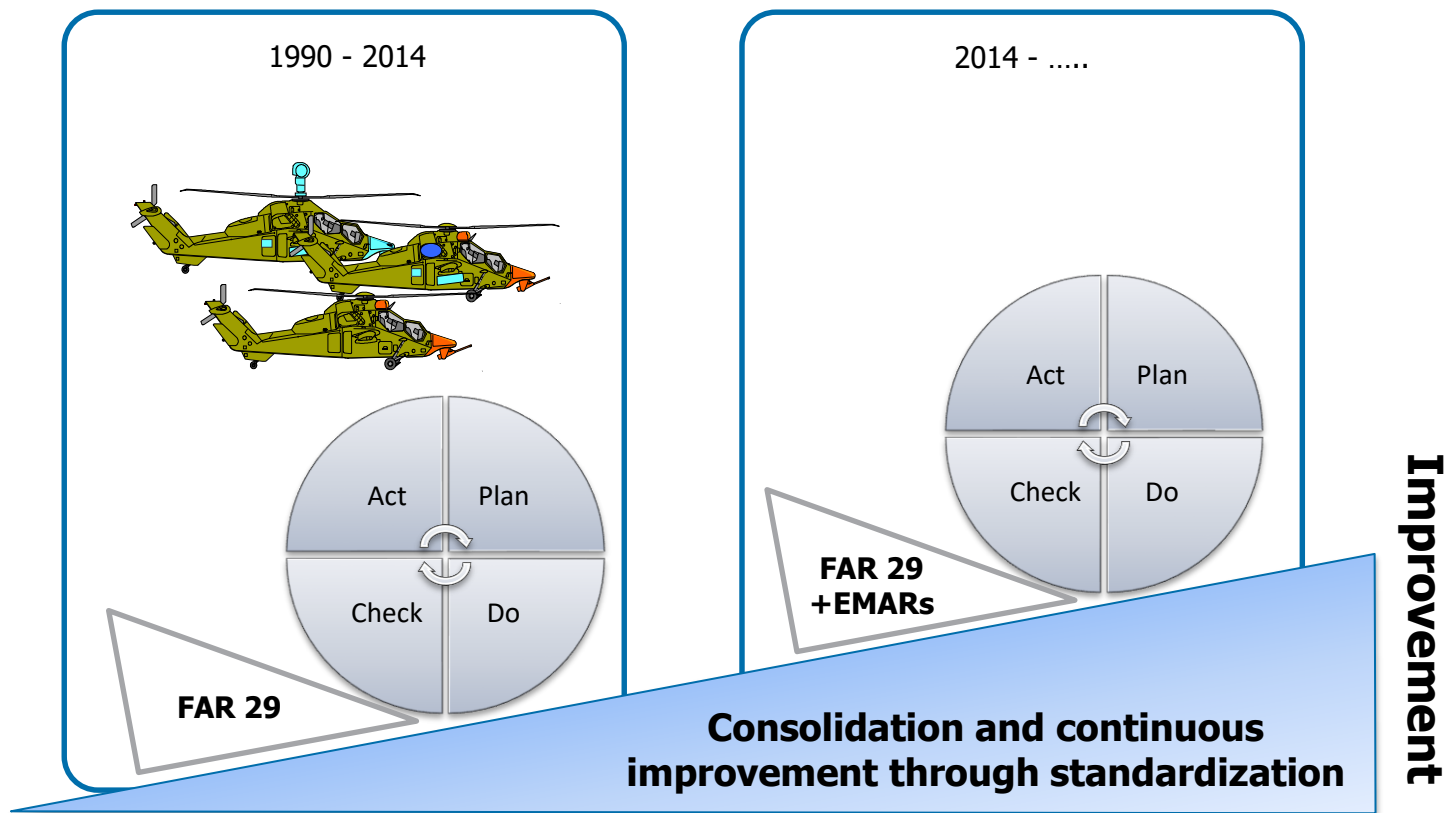


5. TIGER airworthiness controlled environment

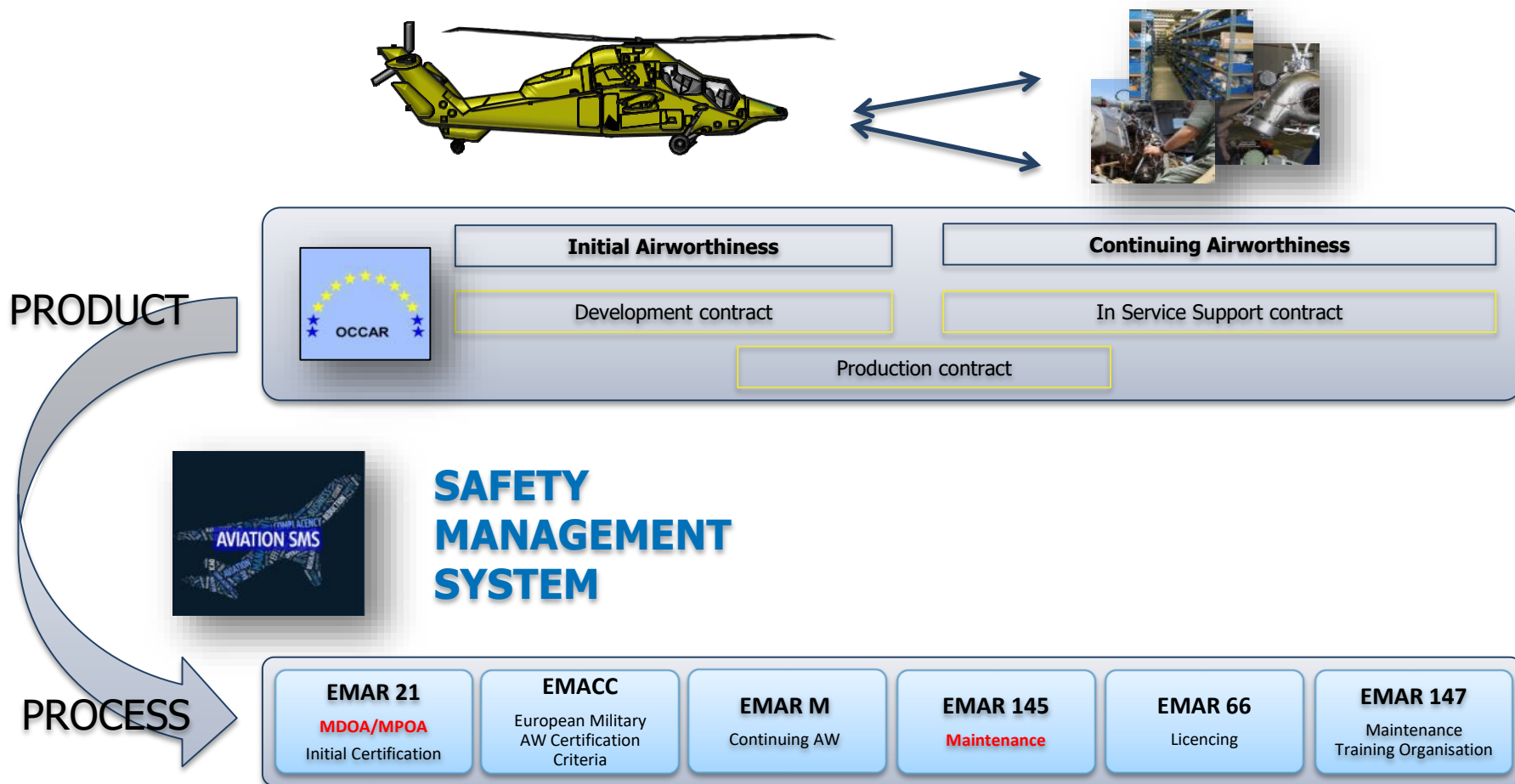
Improvement initiative
Safety Management System
Safety Risk Management

5. Improvement initiative

Improving our current model should take place via a controlled change process management.



5. Safety Management System



5. Safety Risk Management

Safety Risk Management (SRM) — Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk for the programme.

A formal process within the SMS composed of:

- ☐ Describing the system
- ☐ Identifying the hazards
- ☐ Assessing the risk
- ☐ Analysing the risk
- ☐ Controlling the risk

The SRM process may be embedded in the processes used to provide the product/service.



It introduces the airworthiness and safety criteria into the Programme management risk register to help the decision makers.

6. Conclusions

6. Conclusions



OCCAR Tiger welcomes the definition of European Military Airworthiness Requirements to be implemented as soon as practicable.

It leads to develop, manufacture and operate military products in a fully controlled airworthiness environment as per civilian aircrafts.

Airworthiness requirements in the military environment are carried out by contractual commitments and have to be recognized by each EU Nations.

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